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THE WHEELABRATOR CORPORATION ANNUAL REPORT 1967

File

check to see if anything new

The motions of tools and machinery have long been a force of universal attraction. A spinning wheel, a whirling drill, silent glides of power pistons, the cyclical fury of a pile driver are fascinating in symmetry and programmed repetitiveness.

Not all of industry's intriguing action, however, is available to the eye, hidden as it is behind the protective housings of machines, the shells of motors, the seals of automation.

Many of Wheelabrator's products focus on the important business of cleaning metals and gases and because of their turbulent natures, the processes are often controlled automatically or remotely, by the men responsible for their operations.

In this report, for the first time, a sequence of dramatic photographs lifts the curtain on—

WHEELABRATOR-IN-MOTION.

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THE WHEELABRATOR CORPORATION
ANNUAL REPORT 1967

Directors

William H. Coleman, *Chairman of the Board*

James F. Connaughton, *President and Chief Executive Officer*

Oliver C. Carmichael, Jr., *Chairman of the Board,*
Associates Investment Company, South Bend, Ind.

Charles W. Enyart, *Chairman of the Board,* C. L. Gougler Machine Co., Kent, O.

John M. Galvin, *Vice Chairman,*
Marine Midland Trust Company of Western New York, Buffalo, N.Y.

Bernhard K. Greuter, *Vice President,* George Fischer Limited, Schaffhausen, Switzerland

Denis W. G. L. Haviland, C.B., *Chairman of the Board,*
Staveley Industries Ltd., London, England

Walter M. Jeffords, Jr., *President,* Northern Utilities, Inc., Portland, Me.

Carter Kissell, *Partner,* Jones, Day, Cockley & Reavis, Cleveland, O.

John J. Lee, *Retired Senior Vice President,* Buffalo, N.Y.

Max Muller, *President,* Basic Incorporated, Cleveland, O.

Albert E. Rising, Jr., *Consulting Metallurgist; Vice Chairman of the Board,*
The Equity Corporation, New York, N.Y.

Officers

William H. Coleman, *Chairman of the Board*

James F. Connaughton, *President and Chief Executive Officer*

Jacob A. Schmidt, Jr., *Vice President, Finance and Treasurer*

Kenneth E. Blessing, *Vice President*

William Butler, 3rd, *Vice President, Commercial Relations*

Robert F. Hurt, *Vice President*

Edward W. Chapin, *Secretary*

Stanley R. Twitchell, *Controller*

Corporate Data

Offices
400 South Byrkit Avenue, Mishawaka, Ind. 46544

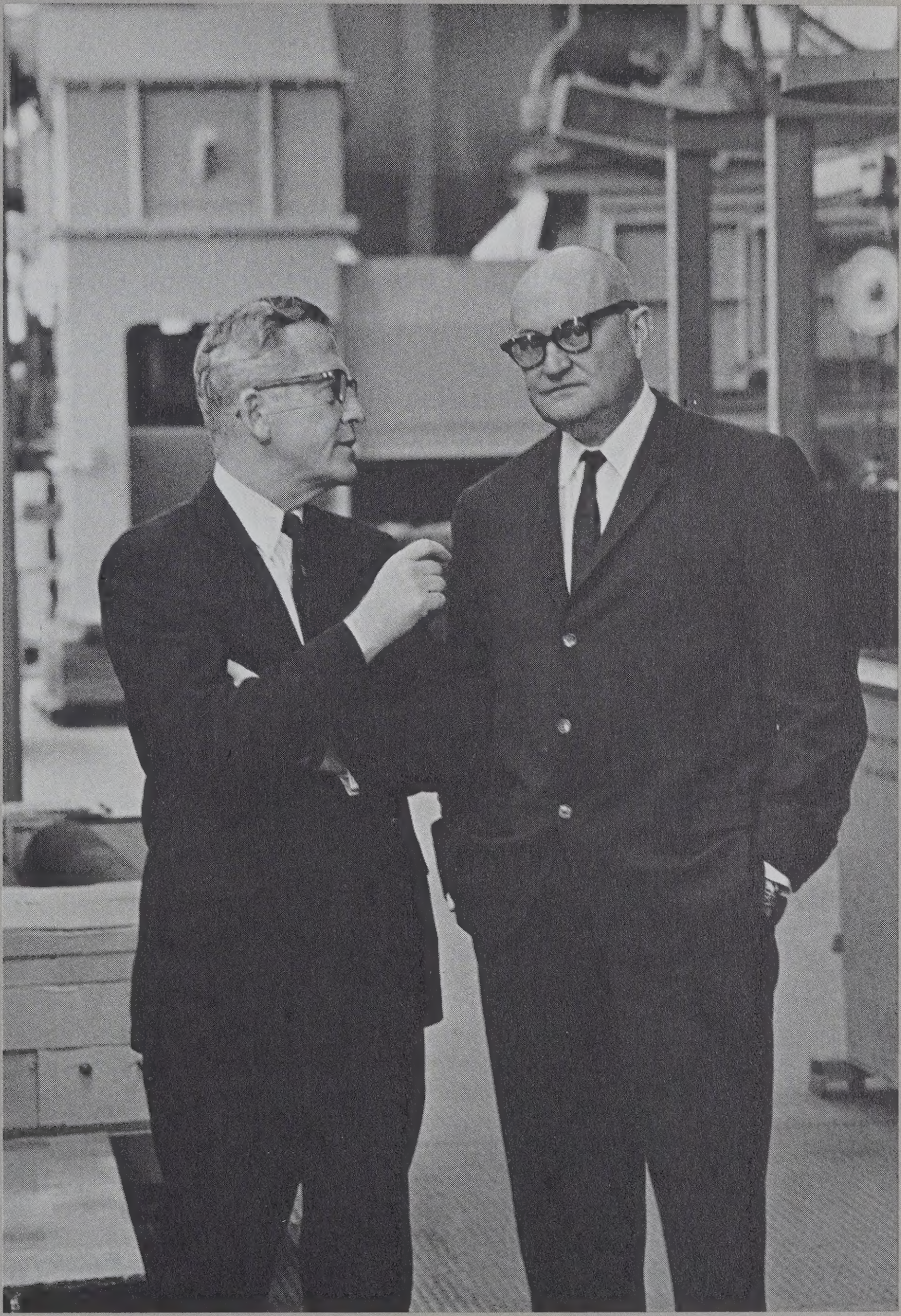
Stock Listing
American Stock Exchange

Transfer Agent
The Chase Manhattan Bank, N.A., New York, N.Y. 10015

Registrar
Marine Midland Grace Trust Company of New York, New York, N.Y. 10015

FINANCIAL YEAR IN REVIEW

	1967	1966
Sales Increased 5%	$73,497,760	$70,001,474
Gross Profit Increased 5%	$19,407,591	$18,443,922
% to Sales	26.4%	26.3%
Income After Taxes Increased 8%	$ 4,019,136	$ 3,735,200
% to Sales	5.5%	5.3%
% to Stockholders' Equity	10.9%	11.4%
Working Capital at Year End	$26,445,330	$24,579,450
Stockholders' Equity at Year End	$36,988,931	$32,728,687
Common Stockholders' Equity	$23,490,076	$18,972,057
Shares Outstanding at Year End	1,365,415	1,270,895
Book Value Per Share	$ 17.20	$ 14.93
December 31, Market Value	$ 38.25	$ 16.75
Dividends Paid Per Share		
1st Preferred	$ 1.50	$ 1.50
2nd Preferred	$ .25	$ .25
Common	$ .70	$ .70
Earnings Per Common Share, after Preferred Dividend Requirement—		
Average Common Shares Outstanding	1,274,499	1,249,363
Before Extraordinary Item	$ 2.45	$ 2.44
Extraordinary Item	$ .17	$ —
After Extraordinary Item	$ 2.62	$ 2.44
Earnings Per Common Share, Assuming Conversion of all Preferred Stock	$ 1.68	$ 1.56
Stockholders	2,989	3,125
Employes	3,487	3,416

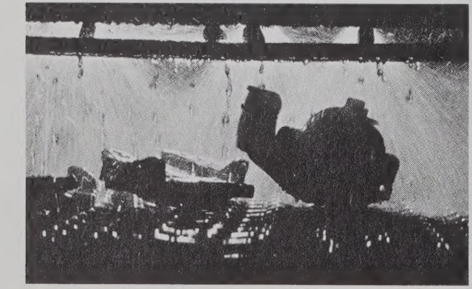


Mr. Coleman, left, and Mr. Connaughton inspect the demonstration laboratory at Wheelabrator.

TO THE STOCKHOLDERS:

Cleaned steel bars emerging from a special Wheelabrator machine.

Parts which have been treated in a Lorco Vibrator receive a final water rinse.



By all standard measurements, 1967 was another good year for the corporation.

Results of operations improved for the fourth consecutive period. Sales increased five per cent, net income was up eight per cent and the three principal operating divisions raised their levels of performance over 1966.

There were scattered soft spots among our many markets and while business turned erratic after the first six months, it finished strongly at year's end. Overall, the results were at a rate sufficient to sustain the momentum of growth.

No significant highlight nor specific deterrent developed during the year. It was simply a matter of steady results throughout the organization. Canada's economic slowdown had some adverse affect. The devaluation of sterling may have nominal ramifications on international activities, yet, overall conditions at present indicate vigor enough to compensate for any secondary deficiency.

Another year of field experience has emphasized further the diversity of the product lines, some which have long demonstrated their growth characteristics and others which should arrive at maturity in the future, or near future.

The research effort was extended largely in the areas of greatest promise, particularly in metal cleaning, air pollution control and the applications of newer materials in aerospace fabrication.

The capital expansion of the past 36 months has provided modern manufacturing techniques and a reservoir of capacity for business expected to be booked into the '70s. The building program increased the Wheelabrator Division's usable space in Mishawaka by 44 per cent.

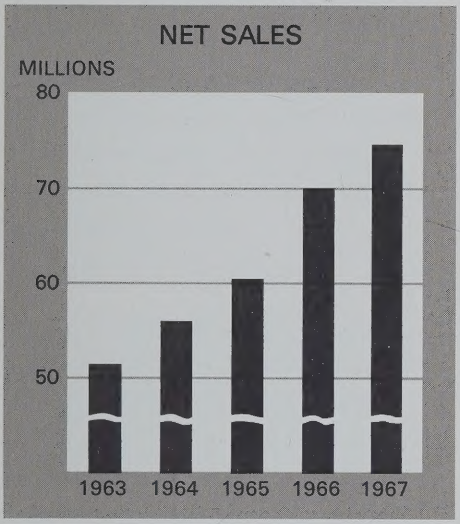
The Twin Industries Corporation Division, with new facilities and equipment, expanded its capability to compete in this era of giant jet transports.

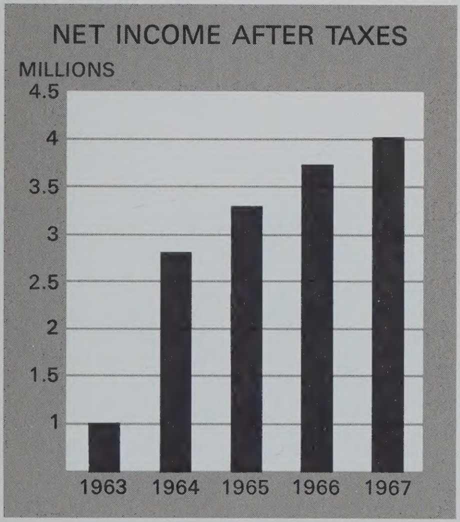
FINANCIAL

During 1967, the corporation operated at record sales and earnings levels.

Sales were $73,497,760, compared with $70,001,474 in the previous year. This increase was somewhat below forecast and below the increases of the past three years, but material enough to resist the trend evidenced in many areas of the metalworking industry.

Profitability as a percentage of sales was consistent with previous periods. Net income rose from $3,735,200 to $4,019,136. This included a special item of $219,615, representing the after-tax settlement of a claim by Twin against the Federal government in connection with previously completed contracts.





After payment of the two series of preferred dividends, income available to the common shares was $3,343,118, compared with $3,049,527 in 1966.

For the first time, computation of the per share earnings of common stock in 1967 was based on the average number of shares outstanding during the year. In previous years, per share earnings were calculated on the number of shares outstanding at the end of the 12 months.

By this new method of computation, earnings per share in 1967, including the special item, were $2.62 compared to earnings per share of $2.44 in 1966. Last year, per share earnings were reported at $2.40, under the then prevailing method of computation.

The Board of Directors voted the regular quarterly dividends of 15 cents and a special dividend of 10 cents, or a total of 70 cents on the common shares. Regular quarterly dividends were also paid on the preferred shares.

Backlog of orders at year's end was $57,300,000 almost identical to that reported last year. Twin's portion of the backlog was $45,700,000 with Wheelabrator's bookings at $11,600,000.

Long-term indebtedness reached $8 million during the year, reflecting cumulative funding for the capital expansion programs. Borrowings are scheduled to continue on a lesser scale in 1968, principally to support the cost of tooling and materials for the long-range aerospace contracts at Twin. These costs are amortized in relation to deliveries.

In December, a long contemplated transaction was concluded, the purchase of plants and properties the corporation has leased, in some instances for 20 years. Cost of the transaction was $3,034,318 including 73,774 shares of authorized but unissued common stock, with a market value of $1,816,685. The proposal was approved by stockholders at the annual meeting and by the Securities and Exchange Commission.

Included were four plants in Mishawaka and South Bend, Ind., and Riverton, N.J., totalling 425,000 square feet, 45,000 of which are in New Jersey.

WHEELABRATOR DIVISION

Principal programs of this Division again focused on the cleaning of metals, plastics and rubber and the cleaning of gas streams to prevent air pollution.

The three methods of metals cleaning—airless blasting, vibratory finishing and ultrasonics—recorded increased sales in their respective markets. Each year develops new requirements for cleaning or some other treatment by Wheelabrator equipment. The scope of these applications now ranges from huge sections of structural steel to microscopic electronic sections, with thousands of items in between.

Noticeable in at least the past five years, has been the steadily growing demand for specially engineered cleaning equipment. Where once standard types were predominant in numbers and dollars, special machines now produce an equivalent dollar volume on one-third the standard units sold.

- Three definitive trends are apparent. The demand for blast cleaning of structural and plate steel prior to surface preparation is steadily increasing and this may continue to where national specifications will require all steel to be shot blasted before painting or coating.
- Requests for automated equipment, both in shot blast and vibratory finishing lines, are growing firmer as companies seek this means of overcoming higher costs.
- The third application area on the rise is shot peening, a process which employs abrasive blasting to increase the life of parts subject to stress. The aerospace industry, in its search for lighter, stronger materials, is looking more and more to shot peening in the weight vs. strength consideration.

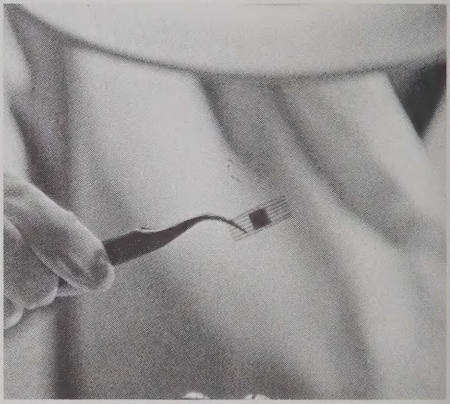
The U. S. Tube and Foundry Co. Inc. of Brooklyn became the first company in the United States to order a NAD system, the patented process which eliminates the use of acid pickling in the cold rolling of low carbon steel, and diminishes the water pollution problem associated with waste acid.

The total air pollution control effort was centralized in an autonomous new division in September to coordinate more effectively the company's four collection control systems and to provide a more unified and intensified approach to industry's problems. Also included are the operations in Riverton, N.J., and Galt, Ont., which manufacture fabric filters for control systems.

This divisional responsibility not only provides a hard-core nucleus for today's needs but strengthens the base for orderly expansion when the demand dictates.

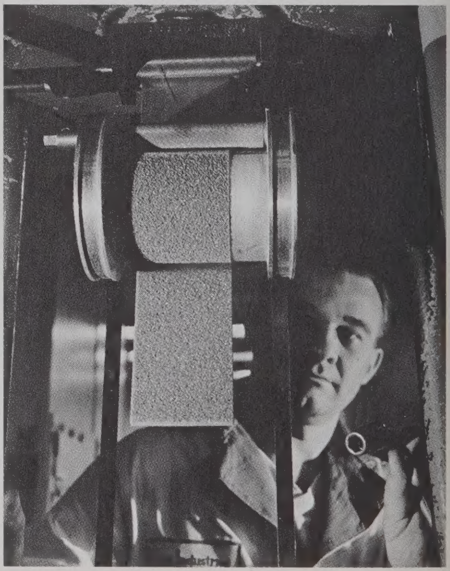
Sales of air pollution control systems were up slightly, not sharply enough, however, to indicate a definitive trend.

Two contracts in the company's relatively new field of electrostatic precipitation can be considered important. One, with a cement company, is already in the installation stage, and the second, to control emissions from a New York City incinerator, is scheduled to start up this summer. The latter will be one of the first of this application in this country.



Delta Sonics equipment specializes in electronic components of minute size.

A sample of floor panel material for the Boeing 747 tested for adhesive qualities at Twin.



In the fabric filter line, which continues to dominate all other company air pollution control methods, there were fewer systems sold by the company in 1967 but the dollar volume was higher.

The first installation of the fourth type of system, the new low energy wet scrubber, was also made in 1967 and several other units were sold for operation this year.

TWIN INDUSTRIES

The year was rather eventful for Twin Industries since it marked the emergence of the Division as a factor in the first of the new family of giant transport aircraft, a series expected to be in production at least until 1978.

Three contracts were received in support of the Boeing 747 Jumbo Jet. Shipments were begun on two projects while the third was still in preliminary stages at the end of the year. Another important contract is currently under negotiation.

Two awards, for bonded window panel assemblies and fuselage frames for the 747, came from the Norair Division of the Northrop Company, and the third, for floor panel sections for the passenger and cargo versions of the 747, was a direct assignment from Boeing.

Twin's ability to perform on long-range schedules is best exemplified by its experience from the very origin of Boeing's large jet transport program. Since 1953, Twin has delivered more than 3000 major assemblies for Boeing's 707, 720 and 727 transports, and for the U. S. Air Force's B-52 and KC-135. And the commercial phase of this work will carry through 1969 since the year also saw additional follow-on orders for fins, rudders and wing spoilers for the 707's and 720's.

The floor panels add a new dimension to Twin's specialty in the bonding field since they will be constructed of polyvinyl chloride core, a plastic foam bonded to very thin sheets of aluminum and titanium. Twin's previous bonding work has been largely with metal-to-metal.

Another major portion of the efforts of the Buffalo plants is devoted to construction of the complete tail section for the Grumman GS-II executive jet transport.

The 14 contracts received in 1967 totalled $21.5 million. Eight of the contracts were for follow-on work and six for new programs. Sales were the highest in eight years and the backlog of orders the highest in twelve years.

Of Twin's programs, 64 percent is concerned with commercial aircraft and 36 per cent involves defense projects.

Twin demonstrated its versatility in a number of areas including the building of major components for an in-flight simulator to train SST pilots, under contract with Cornell Aeronautical Laboratory; jet engine splitter assemblies for the General Electric power plant to be used in the Lockheed C-5A; parts for Bell helicopters and the Boeing 737 medium range jet; door assemblies for the Norair F-5A Freedom Fighter and electronic equipment consoles for Raytheon's Hawk missile.

BALCRANK

The year was the largest in terms of sales in the history of the Balcrank Division. Here, again, none of its four basic product lines surpassed another in point of volume since the increase was general in each category. Sales are largely handled by special agents and representatives.

Balcrank is involved with products in four broad categories—machinery accessories, lubrication equipment, service station hardware and air-motor pumps. It is the largest source in the world for machinery manual accessories and controls and, where once its sales were almost exclusively to machine tool makers, it has recently developed applications for these controls on a broad variety of general machinery.

The acceptance of the proprietary Jet Pulser Pump by industry led to the introduction of a second and larger model in 1967. These pumps feed coolants at pulsating pressures through a wide range of oil-hole drills and other tools. The pulsating pressure generates faster, more efficient drilling, better surface conditions of the parts and has an unusual time-saving fringe benefit—it removes chips automatically without interrupting the drilling process.

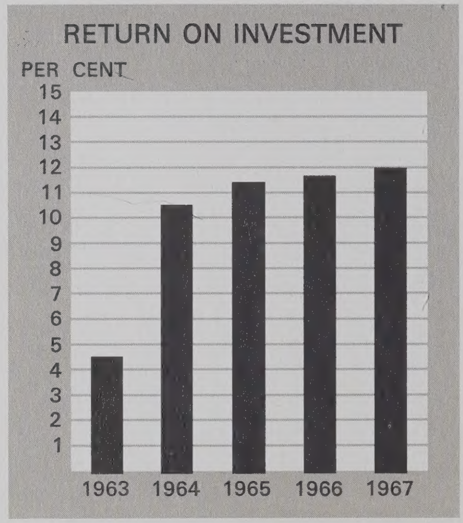
The lubrication line grows in diversity yearly as automobile dealers, truck terminals and service stations seek more efficient, cost saving methods in maintenance practices. A multiplicity of products is available in this field, including reels, pumps and general accessories. An oil inventory system was one of the new features introduced in '67.

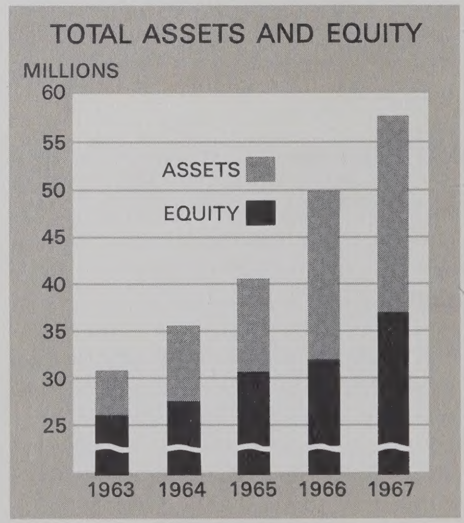
RESEARCH & DEVELOPMENT

There was an apparent acceleration in research and development projects during the year involving the broad phases of air pollution, the cleaning of metals and various manufacturing procedures.

Many of the programs are in the applied research area where attention is devoted to new products, more effective new materials, product improvement and cost reduction in products and in production methods.

A radical new machine was developed for cleaning metal under conditions heretofore untried. At this writing, the shot blast unit is being tested on location. Prototypes of two other cleaning machines were developed for extensive laboratory testing, each a departure from Wheelabrator's many other abrasive cleaning designs.





Manufacturing research was concerned with new production practices, with methods to broaden present capabilities and with the investigation and development of technologies to meet future requirements.

Air pollution projects were spread over all four basic principles of combating contaminants. Particular emphasis was on advanced synthetic fabrics for cloth collectors and an ambitious on-site experiment with fly ash and sulfur dioxide emissions from a coal-fired power generating station. The latter investigation will continue well into 1969.

INTERNATIONAL

The corporation's international operations moved along on a growth curve during the year, from the standpoint of additional joint ventures as well as from the sales volumes of established associates.

Wheelabrator now has 33 associates in 22 foreign countries, of which 21 are joint or wholly-owned ventures and 12 are manufacturing licensees and sales representatives.

Virtually without exception, each of the associated companies generated higher sales of Wheelabrator products in the assigned territories. Those areas not under international agreements, particularly Central America and certain South American countries, were covered by export shipments from domestic plants, and these remained at a strong level.

Interest in air pollution control overseas appears to be growing. As a result, Tilghman Wheelabrator Limited formed a new sales and engineering organization in Germany and entered a long range agreement with Wheelabrator-Allevard of France to pool efforts in a joint venture to expand control equipment sales in Europe. Allevard has also formed a subsidiary for the same purpose in Spain. Arrangements were made with Indabrator Limited of Bombay to market Wheelabrator's fabric filter type of anti-pollution systems in India.

Sintobrator Ltd., the Japanese associate, launched a five-year program of expansion, in anticipation of the continuance of that country's economic resurgence.

For several years, Wheelabrator has engaged in a program to capture additional markets in a number of foreign countries. This includes what the company calls metal cleaning operations, a unique combination of contract cleaning service and equipment demonstration launched in partnership with citizens of the lands in which they operate.

Four more of these modest operations became active in 1967 in Germany, Thailand, Argentina and the Philippines and six are scheduled to get underway early in 1968, in Singapore; New Delhi, India; Bogota, Colombia; Sao Paulo, Brazil and two in Mexico.

SUMMARY

In 1968, Wheelabrator will mark its 60th anniversary. Not all of the operating elements are as old as the founding company but this is an organization that has grown rapidly in recent years in the number and complexity of products and the number and complexity of customers.

There is little in the world of metals, plastics and rubber which can not be cleaned or otherwise improved by Wheelabrator's abrasive machines. The potential in air pollution control is not a question of whether—but when. A higher level of capability is apparent in the building of large and complex aerospace assemblies and in the advanced art of bonding metal to metal and metal to plastics. Lubricating products are reaching into other than normally recognized markets.

With eight divisions in the United States, four in Canada and joint ventures and other associates in 21 other lands, the impact on domestic and international industry will grow in direct proportion to the continued acceptance of our products and services.

We feel that our programs and the skills of our people can build more valuable, more dependable, more economic products and systems to insure that acceptance. We sincerely want to stay ahead in the technology which leads to the development of products with optimum serviceability and sensible costs.

We shall continue to attempt to merit the confidence and support of our stockholders with a consciousness of stability and profitability and the cooperation and loyalty of our employes with sound management techniques and an appreciation of their future security.

FOR THE BOARD OF DIRECTORS

W. H. Coleman

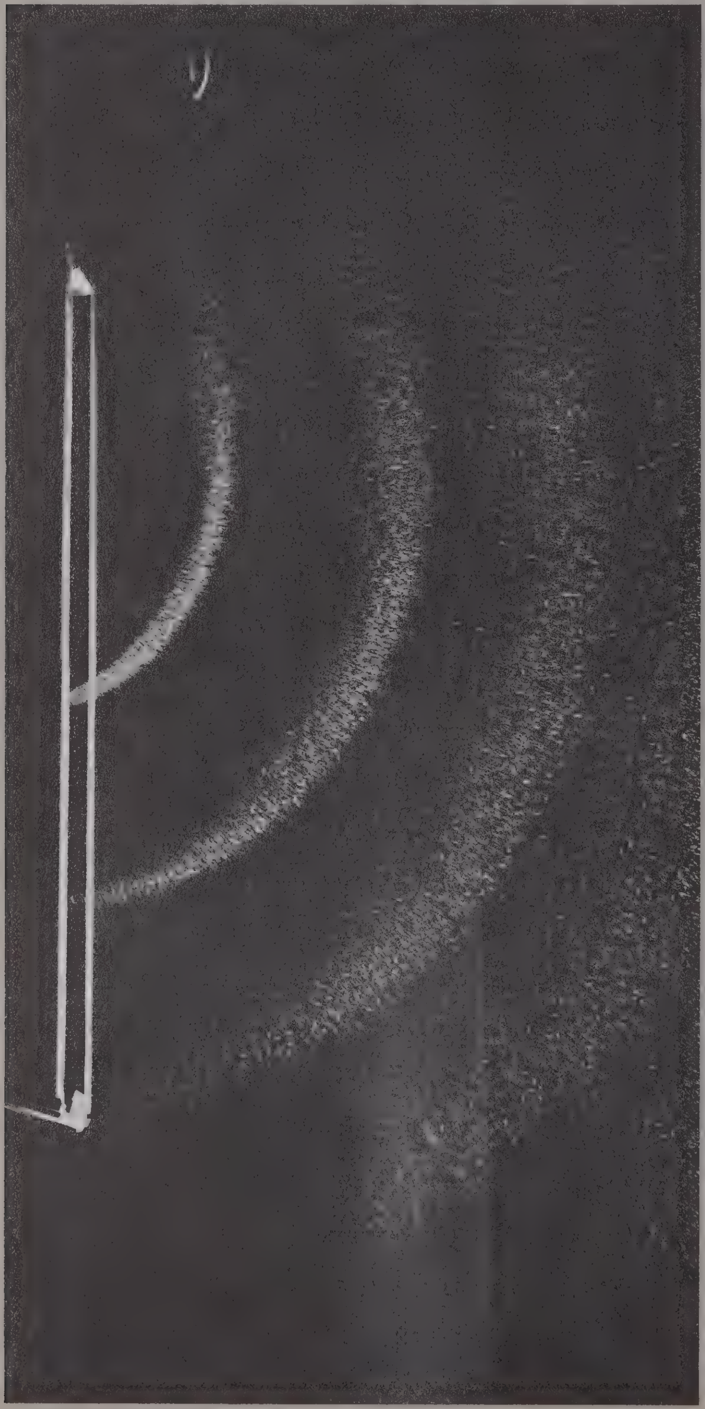
William H. Coleman
Chairman

James F. Connaughton

James F. Connaughton
President

March 1, 1968

A pattern of repetitive waves is formed when steel abrasives are propelled in an airless blasting machine. More than 1.5 billion pellets per minute move in these high velocity waves towards parts to be treated.



LaSalle Steel Company of Chicago, a specialist in cold-finished steel bars, employs several Wheelabrator machines like this to shot blast raw material to improve the surface of the finished bar product. The bars continuously move into the abrasive blasting area.

This 75-foot steel section will have all surface scale and rust removed by a Wheelabrator shot blast machine at the Mississippi Valley Structural Steel Co., St. Louis, a fabricator of steel for bridges and buildings. Nine of these 15-ton girders are cleaned in two hours.

The theory of airless blasting, simply stated, is that the part that can be hit by centrifugally propelled abrasives is the part that can be cleaned.

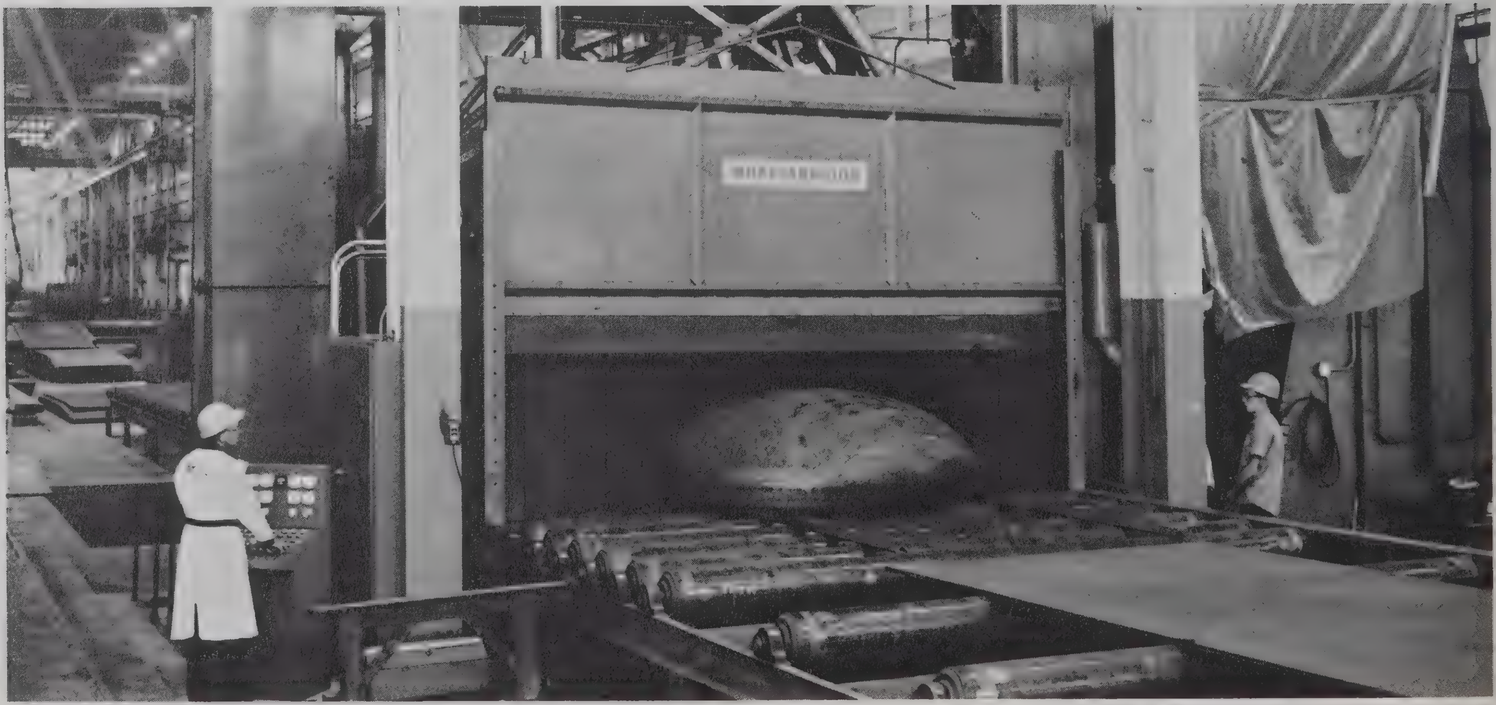
Wheelabrator has embraced this theory since it pioneered wheel-thrown abrasives in 1933. Wheels are placed in any position inside a cleaning cabinet—top, sides or bottom—whichever angle is the most effective.

To further the theory, parts to be cleaned are moved by conveyors, turn tables, rollers, rails, swing tables, multi-tables, monorails, ram rolls, ram tunnels and elevators and can be spun, revolved, turned or tumbled.

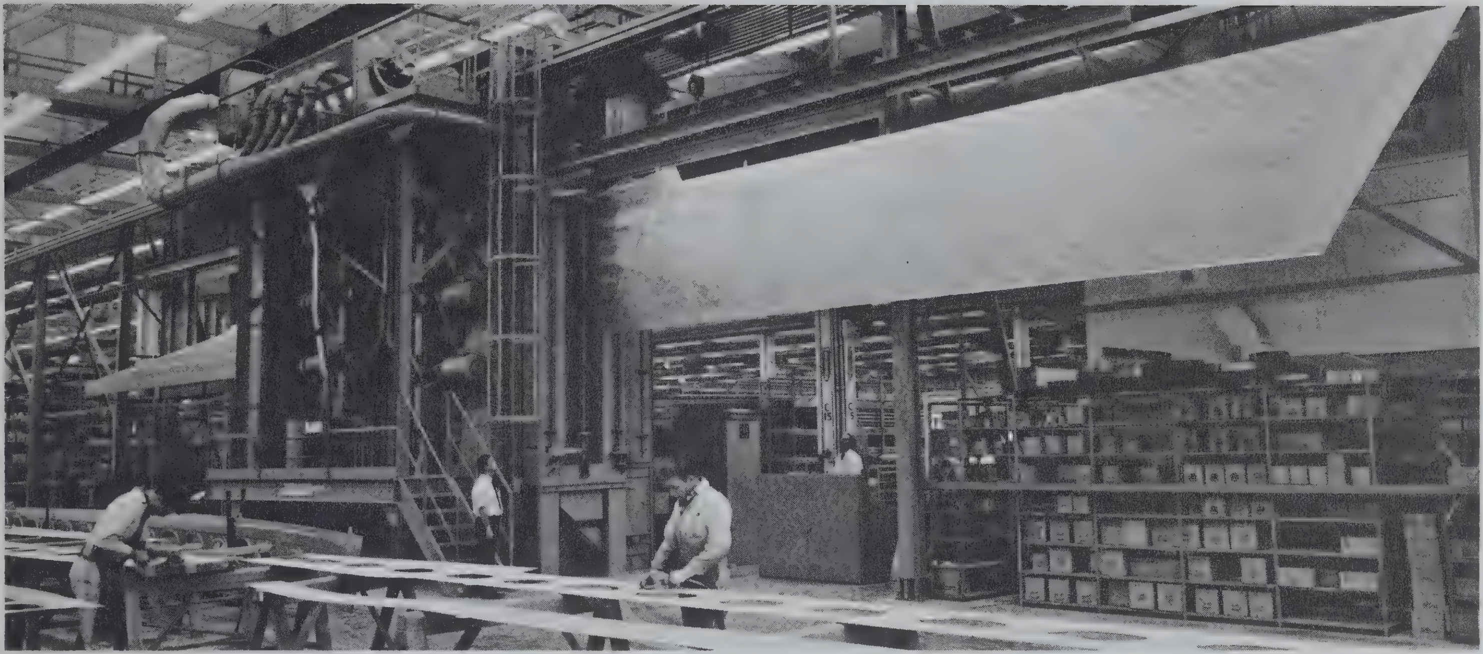
And if it is metal, wood, rubber or plastic, regardless of size and shape, there is an appropriate abrasive—round steel shot, nylon, crushed walnut shells, angugular steel shot, glass beads, granular aluminum, steel grit, cut wire or cast iron shot.

Wheelabrator equipment is tailored for a multiplicity of sizes and shapes of parts and varying production rates. Cylinder blocks for outboard motors are processed in a spinner cabinet at Johnson Motors Company in Waukegan, Ill. Spin action assures cleanliness of all surfaces.

An unusual interior view shows the versatility of a 96-inch swing table with double doors in the Sibley Machine and Foundry Corp., South Bend. The parts on the table nearest the camera were cleaned while a second table was loaded with different sized parts.



The AMF Beaird, Inc., plant in Shreveport, La., shot blasts all steel plate, up to 60-foot lengths, prior to fabrication. This Wheelabrator machine descales and cleans an assortment of items, such as the large diameter tank head which here is preceding steel plate into the blast chamber.

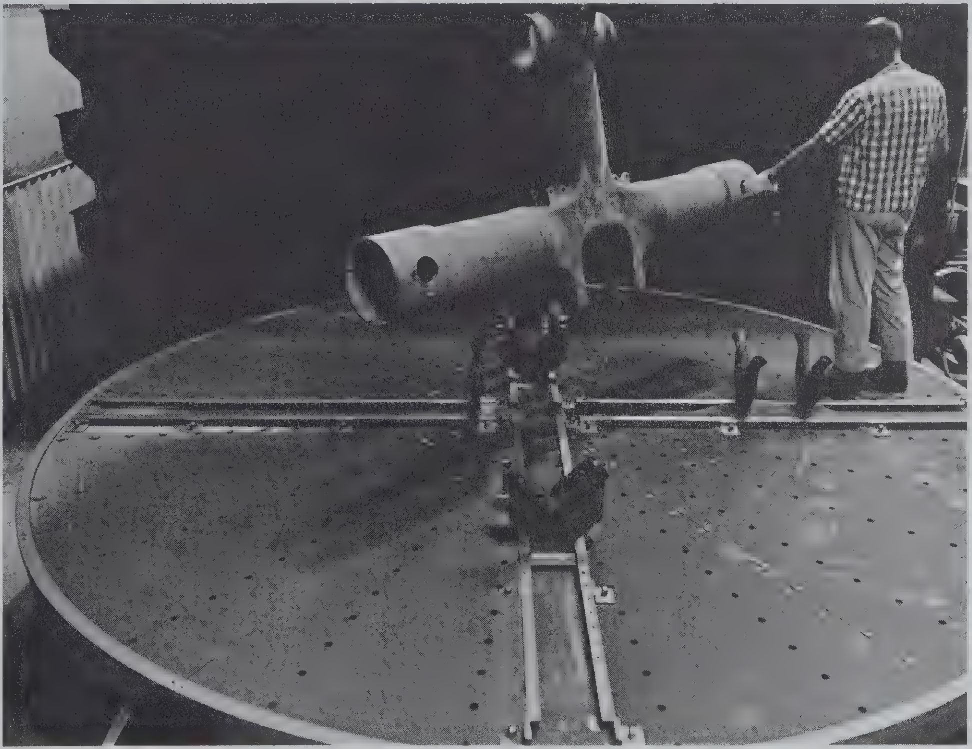


Tomorrow's aircraft are coming under the influence of shot peening. At the Auburn, Wash., plant of The Boeing Company, large sections of wing skin panels for the 747 super jet are being peened by a Wheelabrator machine which went into operation in 1967.

Peening—drawing, bending or flattening by hammering—dates back to when knights hammered swords to improve their strength. Peening has moved far from the confines of the blacksmith shop and is being applied more and more to increase the strength of the advanced materials used by industry today.

Wheelabrator introduced peening by abrasive blasting in World War II and since then it has been widely used in the automotive industry to extend the fatigue life of springs, gears and many other parts subject to stress.

Use of shot peening in the aerospace industry has expanded rapidly in the past five years, not only as a factor in increasing fatigue life but also as a means to prevent and control corrosion cracking for landing gears, wiring spars, jet engine components and structural parts.



An 1100-pound center axle beam for the main landing gear of the U. S. Air Force C-5A is shot peened by Wheelabrator equipment at the Energy Controls Division of The Bendix Corporation. Each center axle is cleaned or peened five times in this 18 x 28 foot cabinet.

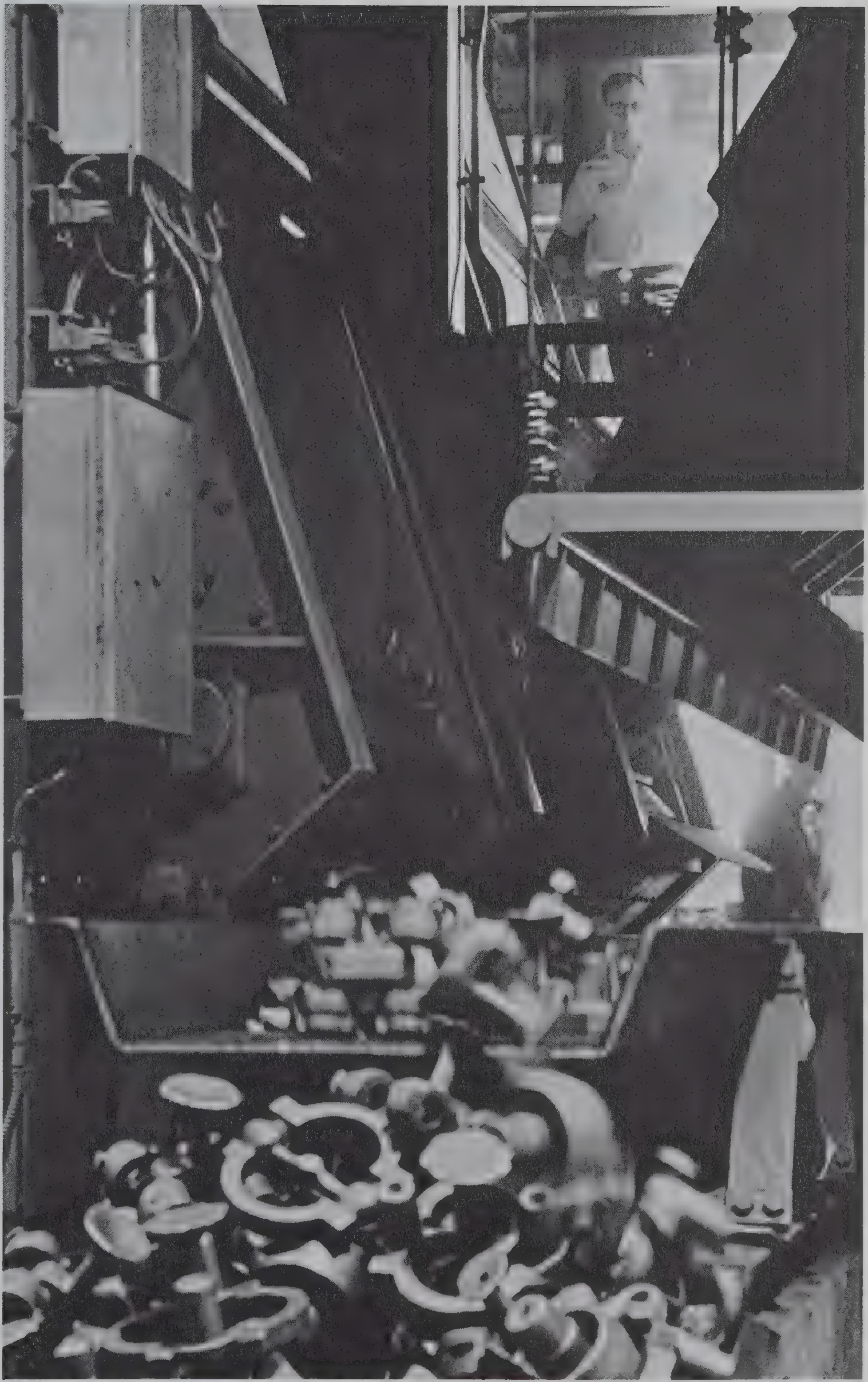
A kaleidoscope of motion occurs in a Tumblast when parts somersault over and over as the treadmill-like conveyor of the machines goes 'round and 'round. The tumbling action exposes all surfaces to the abrasive.

Various sizes of castings for the treads of military tanks are cleaned in a 28-cubic foot Tumblast at the St. Mary's, O., plant of the Goodyear Tire & Rubber Company. Shot blasting not only cleans the metal but also provides suitable surfaces for rubberizing of the parts.

The tumbling action for washing clothes is certainly no secret to the housewife. And tumbling as an adjunct to metal cleaning has been around just as long, if not longer.

Wheelabrator developed in 1926 a device which it called the Tumblast, an endless belt conveyor with a tumbling principle for sand-blast machines. The Tumblast has since been adapted to shot blasting and refined to where sizes now range from a hand-load-and-unload one cubic foot capacity machine to fully automatic equipment and giants with the ability to handle 100 cubic foot work loads.

The Tumblast has built-in flexibility and can adjust itself to just about any work load. As a matter of fact, any part which can be tumbled can be treated with the mixed action of tumbling and blasting.



A push-button type conveyor system feeds a continuous flow of cooled molds into two automated Tumblasts at the Westran Corp., in Muskegon, Mich. The side-by-side machines are loaded by hopper from a six-tiered conveyor and unload automatically. The tumbling and blasting cycle performs three tasks—shakes the sand from the molds, knocks out the cores and cleans the products. Heavy sand load is automatically separated from the abrasive.

The deflashing of simple and complex shaped parts is a favorite assignment for the tumbling action of Wheelabrator machines. Other kinds of abrasives—crushed nut shells and nylon beads—are used to smooth rough edges of plastic parts. The flash left by rubber molds is frozen before it is attacked by steel abrasives. Wheelabrator employs two types of freezing action, one based on liquid nitrogen and a second on cryogenics.

Rubber gas masks for the U. S. Armed Forces are deflashed in a Wheelabrator machine at a Mine Safety Appliances Co. plant in Esmond, R.I. The system quick-freezes the flash only, and the frozen flash is removed by abrasives without affecting the rest of the mask.

The John Oster Manufacturing Co. in Milwaukee operates a small, two cubic foot Tumblast to deflash plastic parts. The handles in the open machine have been blasted with crushed walnut shells and apricot pits and are ready for the well-known line of Osterizers.

Delta Sonics equipment is frequently applied where super-cleanliness is a mandate. These glass plates, which are used in photographic reproductions of tiny grid patterns on silicon wafers, are ultrasonically treated at Motorola's Semiconductor Division in Phoenix, Ariz.

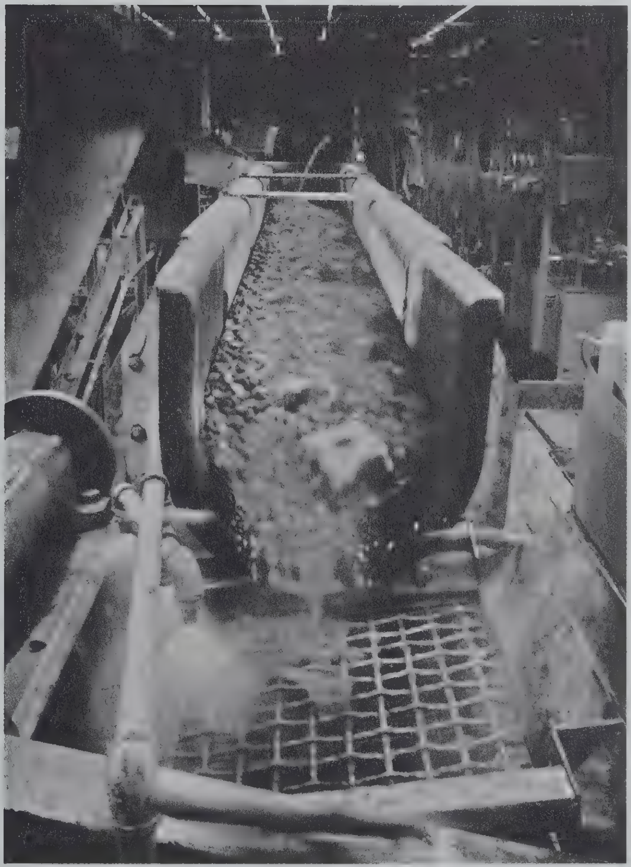
Wheelabrator experienced its first full year with the fifth and newest member of its industrial cleaning family—ultrasonics. This cleaning principle sends bursts of high frequency sound waves through a liquid, causing cavitation or "cold boiling." In the process, microscopic bubbles are formed which implode or collapse, thus releasing the energy which provides the cleaning and scrubbing action. Delta Sonics, Inc., a California subsidiary, designs and builds ultrasonic equipment for cleaning, inspection and degreasing of metals and for the welding of plastics.

Like a whirlpool in slow motion, the churning, vibrating action of Lorco equipment sends thousands of pieces of abrasives grinding, rubbing, scrubbing, scouring, finishing, polishing the every contour of parts.

The Lorco system of precision finishing is a process which adapts itself readily to a part, almost any part, without a preconceived design. It is a random, form-fitting type of cleaning operation and its mixture of abrasives and compounds takes no particular pattern, simply engulfing the parts in work.

There are three distinct movements involved in the Lorco equipment—vibration (or gyration), rotation and a forward-reverse action—all functioning in a restless consort.

Cleaning by the vibratory principle is only 10 years old and its major growth is yet to come.



A fully automated Lorco vibratory system remove burrs and sharp edges from a new type of automotive disc brake at the Bendix Hydraulics Division in St. Joseph, Mich. A double conveyor line brings different sections of the brake housing to the 12-foot long bowl of abrasives.

A shaker mechanism, applying horizontal and vertical forces, gives this harmonic motion to fabric tubes, thus supplying the energy to remove the dust collected on the inner surfaces of the filter tubes.

Seventy feet above ground level, these massive ducts are conveying dust laden gas streams into a Wheelabrator cloth collector at the Jones & Laughlin Stainless and Strip Division in Warren, Mich. The system cleans 25 tons of air per minute and collects 10 tons of dust daily.

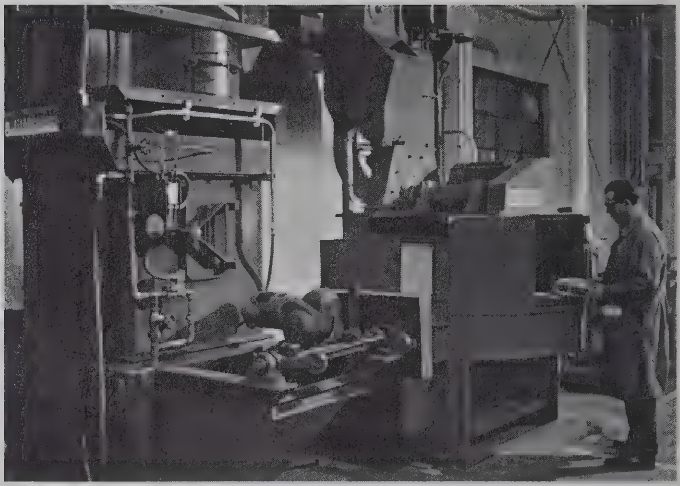
An attack on air pollutants can now be launched on four fronts, with four different Wheelabrator techniques, or a combination of techniques—dry, wet, electrical or a system with no moving parts.

To already established lines, a wet collector or scrubber was added in 1967 to accommodate those conditions to which this technique is most applicable.

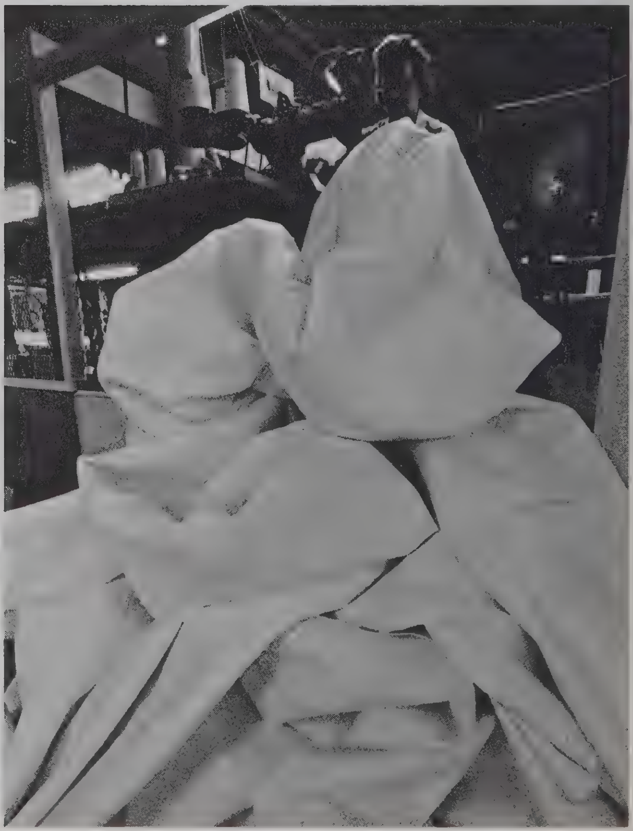
While the use of fabrics for collecting pollutants, which at Wheelabrator can be traced back to 1913, is the company's dominant force, the support of other techniques can help meet whatever requirements are imposed by industry's programs for cleaner air.

Collecting plates in an electrostatic precipitator present an interesting design study for camera. Sixty plates, each 25 feet high and 14 feet wide, are in the Wheelabrator-Lurgi system under construction at the Louisville Cement Company's plant in Speed, Ind.

In a wet collector, dispersed dust particles carried in moving gas are impinged on the surfaces of the millions of foam bubbles formed by the dynamic action of the water and the gas streams.



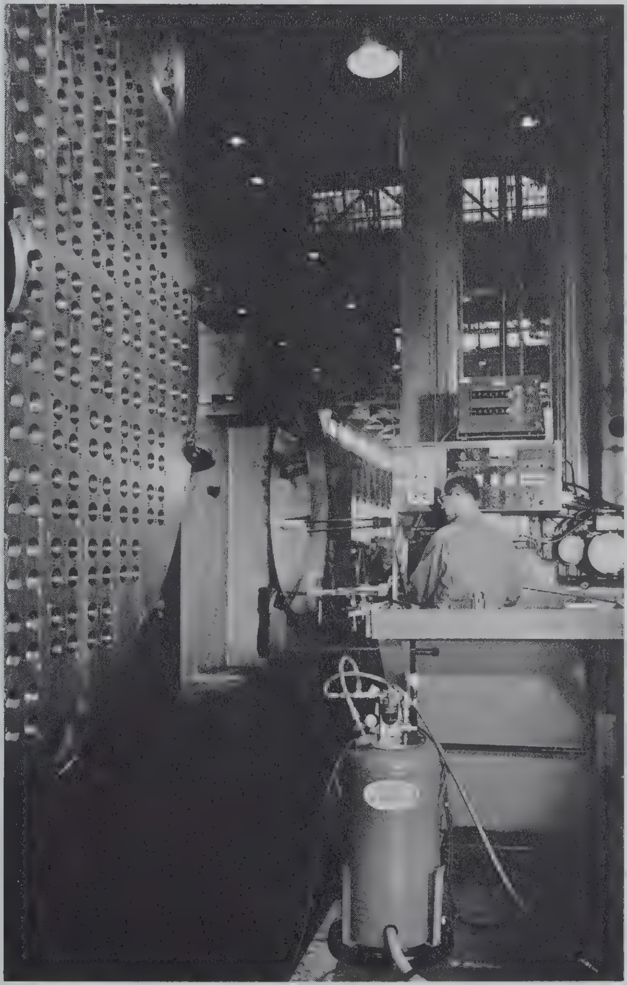
The initial installation of the new Wheelabrator-Turbex wet collector was made in 1967. This model is one of a series and controls the dust from a Wheelabrator blast machine at the Paramount Die Casting Company, Division of Talon, Inc., in St. Joseph, Mich.



A seamstress at the W. W. Criswell Division plant in Riverton, N.J., appears inundated by a sea of cloth. These are 30-foot cloth tubes, among the largest of the three-quarters of a million fabric filters produced annually by Criswell for air pollution control.

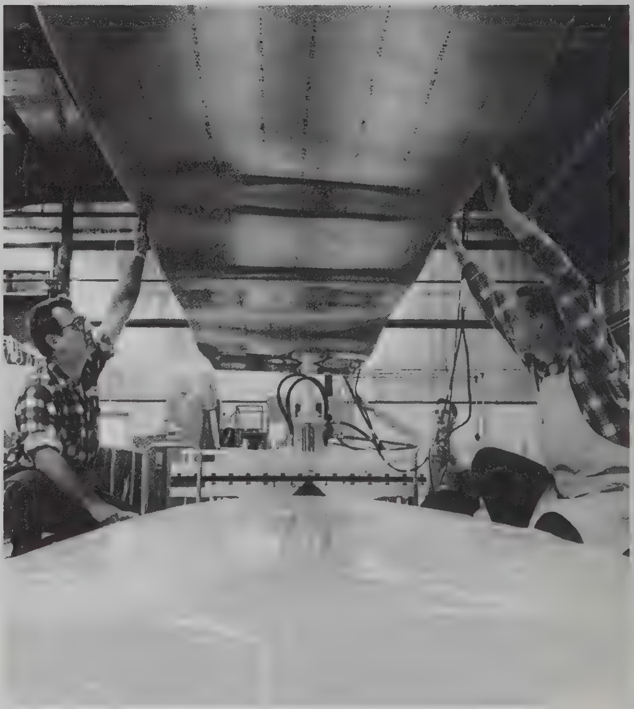
The pulsating movement of a lubricant flowing from a Balcrank Jet Pulser to a deep hole drill is caught by the camera. Chips from the metal are flushed by the pumped lubricant from the hole being drilled.

Systems for speeding the controlled flow of lubricants to vital areas of autos, trucks, aircraft, farm equipment and machine tools have long been a principal effort of the Balcrank Division. Supporting these systems is a variety of such products as—reels, hoses, fittings, special pumps, meters, hand guns and oilers. An extension of this basic knowledge is a pump which feeds lubricants to deep hole drills under a unique pulsating pressure.



A Jet Pulser Pump dramatically speeds the drilling of 4000 holes in the non-ferrous condenser tube sheet, left, at the Marine Division, Westinghouse Electric Corporation, Sunnyvale, Calif. The Balcrank pump is used with a numerically controlled Carlton horizontal drill.

Twin's involvement is in aerodynamic motion, provided by the assemblies and control surfaces it builds for fast moving, high flying jets. This rudder will guide the flight path of a Boeing 707 transport.



Aluminum skins up to eight feet wide by 36 feet long are stretched into a compound shape corresponding to the form block and representative of the configuration of the 747 fuselage in the passenger window area. This 225-ton stretch press was installed by Twin in 1967.

Among its basic capabilities, Twin has long demonstrated a special talent in the bonding of honeycomb. This talent continually encounters fuller utilization, as in 1967 when new contracts brought challenging new assignments.

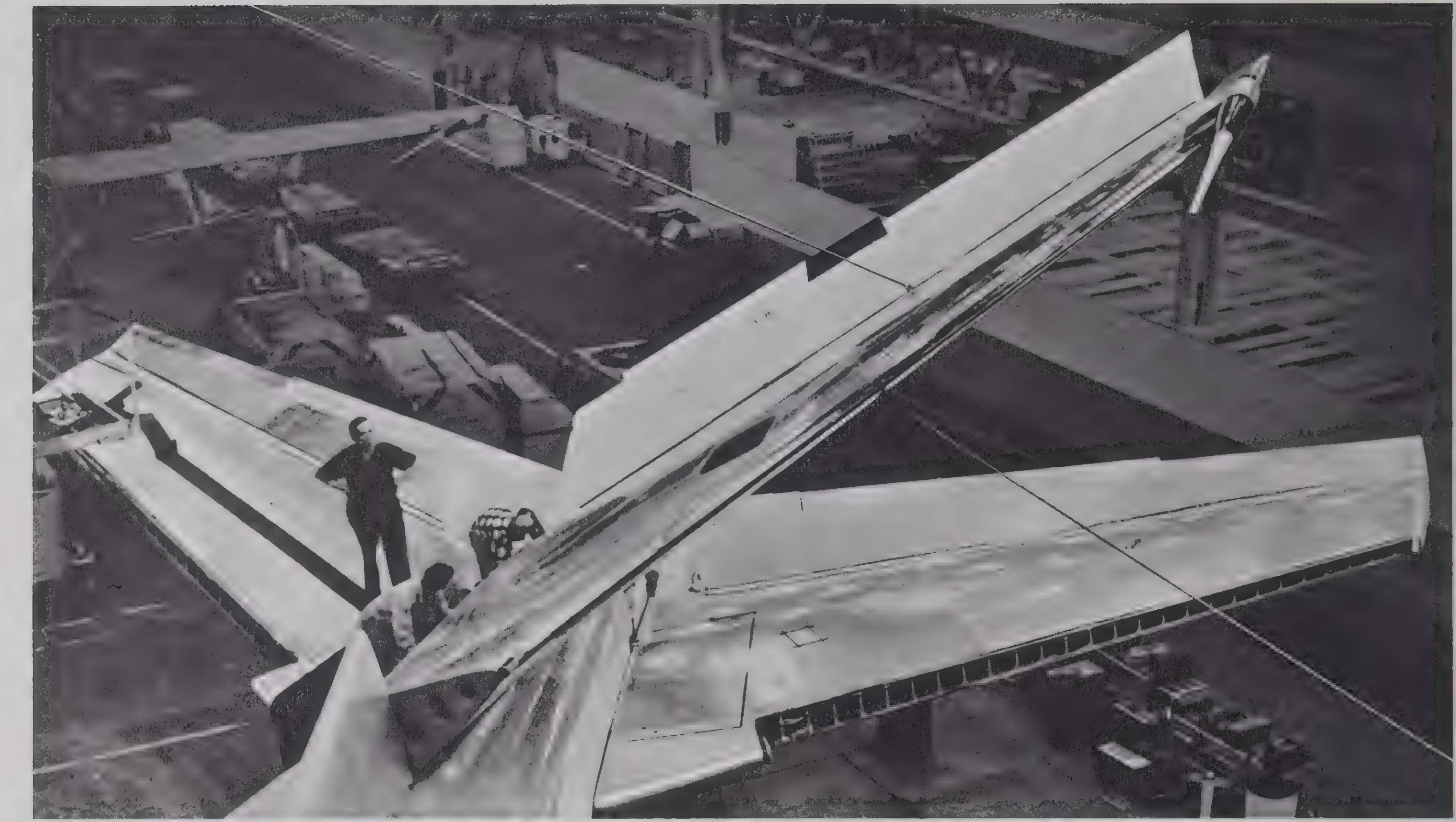
In building window panel assemblies for the 747, Twin is working with larger-than-usual air frame sections which require not only the normal exterior skin bonded to an interior section, but a composite of as many as three additional bonded sections for extreme strength.

Furthermore, a new approach was injected when construction of 747 passenger compartment floors specified the bonding of polyvinyl chloride core to very thin sheets of titanium and aluminum. While it is the first experience for Twin with polyvinyl and titanium, the objective remains constant—the greatest strength with the lightest weight.

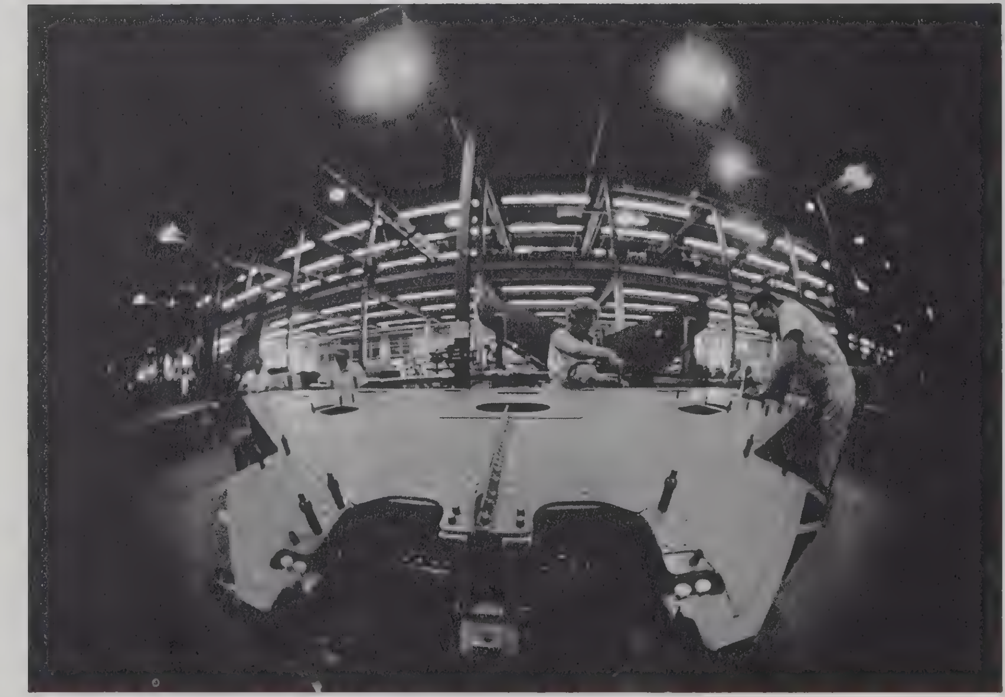
Fabrication of the window panel sections also demonstrates Twin's ability to produce large, single piece units required in the giant aircraft of today—and tomorrow.

Boeing 747 window panels in assembly fixtures are viewed through a completed window panel assembly. Twin builds these panels in several widths to conform with the configurations in different areas of the passenger compartment of the super jet transport.

Eighteen-foot fuselage frame segments are checked by a Twin inspector. Twin furnishes these rib and frame sections for the fuselage structure which Northrop Norair builds for the Boeing 747. The aluminum sections are shaped and chemically milled to reduce weight.



Tail fin and rudder section, almost three stories high, is positioned on the empennage of a 707 jet transport in an assembly area of the Boeing plant in Renton, Wash. Twin has produced almost 1500 ship sets of these assemblies for Boeing jets in the past 12 years.



In addition to commercial aircraft, Twin's programs also include an important assignment for executive jet aircraft, particularly the Grumman Gulfstream II. This stabilizer is in final assembly stages at the Buffalo plant where elevators, fins and rudders are also built for the Gulfstream.

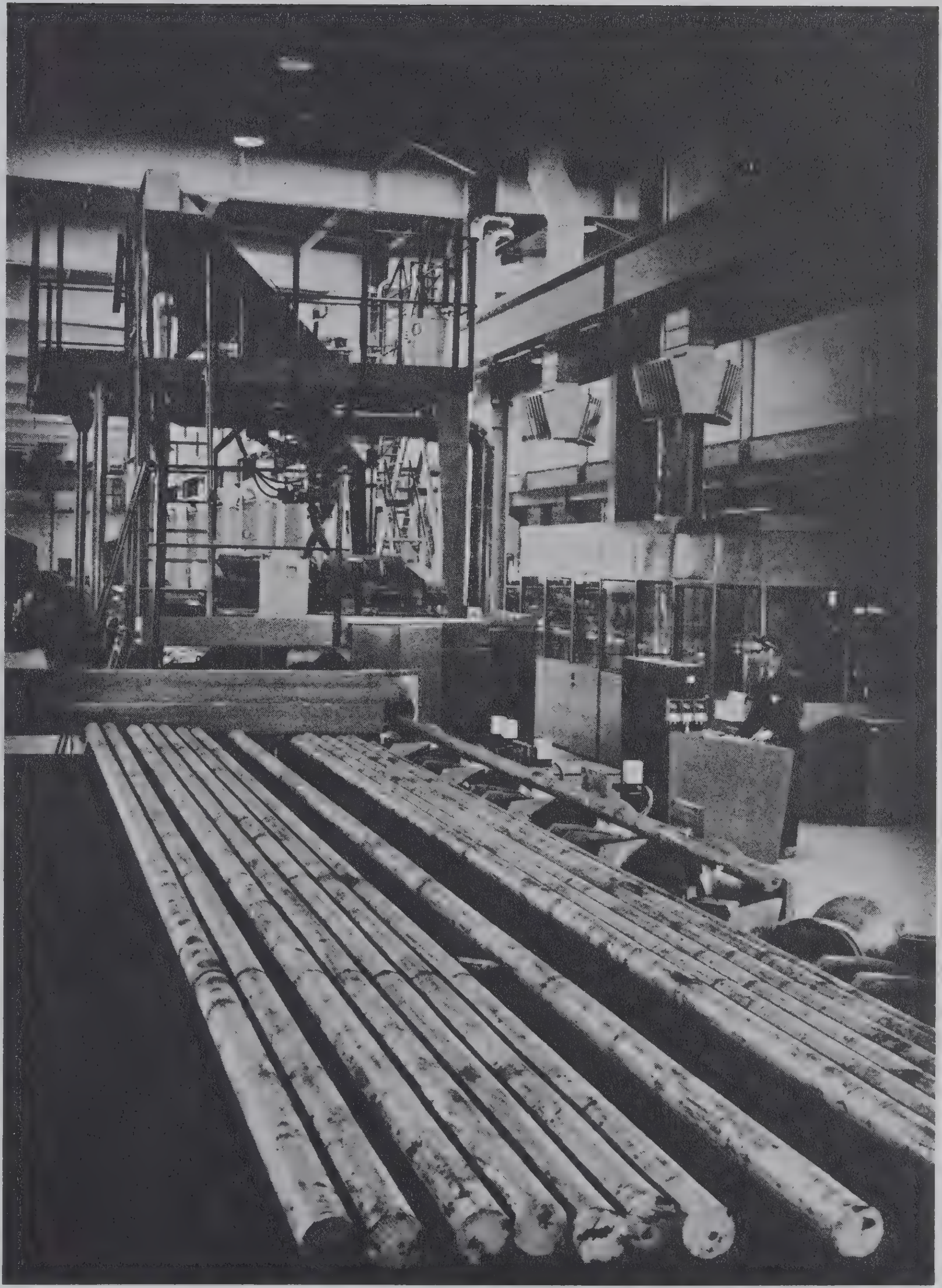
Wheelabrator has maintained an interest in international manufacturing and sales operations since 1935 but the complexion of that interest has undergone rather a complete change in recent years.

Where emphasis overseas was once exclusively on licensing arrangements, the company launched a program for closer working relationships through joint ventures in foreign lands.

This philosophy has obvious advantages. Working liaison is on a sounder, business-like level. Wheelabrator's name is more intimately identifed with its products in international markets. There is a freer flow of manufacturing, engineering and financial information. The equity interests create opportunities for representation on boards of directors and for direct participation in the growth of the various companies.

These advantages are understandably not unilateral, for the scope of international activities has grown rapidly and successfully. Overseas equity associations now number 21, with a dozen other companies involved either in manufacturing licensing arrangements or as sales representatives. Each company manufactures and distributes its products within a specific geographical area.

An international innovation by Wheelabrator involves a series of metal cleaning installations. Basically, these functions provide blast cleaning services under contract to industrial customers in overseas areas but also double as demonstration sites for Wheelabrator products. In many places, such service is being provided for the first time to steel processors, foundries and other fabricators.



Representative of the company's international operations is this Wheelabrator machine built by the Swiss associate, Graber & Wening, to descale round billets. The installation is at Sandvikens Jernverks AB, Sweden, a leader in steels for razor blades and rock drills.

THE WHEELABRATOR CORPORATION AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS—DECEMBER 31, 1967 AND 1966

ASSETS	1967	1966
CURRENT ASSETS:		
Cash	$ 3,035,079	$ 2,376,210
Notes and accounts receivable, less reserves—		
Trade	9,945,462	10,678,759
From sales under contracts	4,061,384	3,826,024
Other	1,234,416	661,481
Inventories, at the lower of cost or market—		
Raw materials and supplies (first in, first out)	2,367,872	2,723,978
Work in process and finished goods (first in, first out)	7,983,748	7,689,266
Contracts in progress	9,341,301	6,721,239
Less—Progress payments	—	(289,925)
Prepaid expenses	381,335	390,171
Total current assets	$38,350,597	$34,777,203
OTHER ASSETS:		
Noncurrent receivables	$ 569,534	$ 616,577
Goodwill, at cost less amortization	634,883	605,763
Other	339,731	338,815
	$ 1,544,148	$ 1,561,155
PROPERTY, PLANT AND EQUIPMENT, at cost:		
Land	$ 440,362	$ 171,642
Buildings and improvements	9,196,651	4,277,899
Machinery and equipment	13,450,096	10,854,466
	$23,087,109	$15,304,007
Less—Reserves for depreciation	9,072,311	7,485,567
	$14,014,798	$ 7,818,440
Leasehold improvements, net	258,304	897,616
	$14,273,102	$ 8,716,056
INVESTMENTS IN AFFILIATED COMPANIES, at cost (Note 1)	$ 3,346,071	$ 2,815,220
	$57,513,918	$47,869,634

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

LIABILITIES	1967	1966
CURRENT LIABILITIES:		
Notes payable	$ 1,758,175	$ 489,000
Accounts payable	4,822,528	3,201,279
Accrued wages, benefits, taxes, etc.	4,271,938	4,318,171
Dividends payable	509,598	487,941
Reserve for Federal and Canadian taxes on income	543,028	1,701,362
Total current liabilities	$11,905,267	$10,197,753
LONG-TERM DEBT:		
6¼% notes, due July 1, 1970	$ 8,000,000	$ 4,250,000
Other, average interest 6½%, payable through 1976	491,345	555,505
	$ 8,491,345	$ 4,805,505
MINORITY INTEREST	$ 128,375	$ 137,689
STOCKHOLDERS' EQUITY (Notes 2, 3 and 4):		
$1.50 cumulative convertible preferred stock, par value $35 per share, redeemable at $36.50 per share; authorized 85,715 shares; outstanding 1967, 20,493 shares; 1966, 27,858 shares	$ 717,255	$ 975,030
5% convertible second preferred stock, par value $5 per share, 2,556,320 shares authorized and outstanding	12,781,600	12,781,600
Common stock, par value $1 per share; authorized 3,000,000 shares; issued 1967, 1,369,715 shares; 1966, 1,275,195 shares	1,369,715	1,275,195
Additional capital	9,227,244	7,230,212
Retained earnings	12,930,333	10,503,866
	$37,026,147	$32,765,903
Less—4,300 shares of common treasury stock, at cost	(37,216)	(37,216)
	$36,988,931	$32,728,687
	$57,513,918	$47,869,634

THE WHEELABRATOR CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME

FOR THE YEARS ENDED DECEMBER 31, 1967 AND 1966

	1967	1966
NET SALES	$73,497,760	$70,001,474
COST OF GOODS SOLD	54,090,169	51,557,552
Gross profit on sales	$19,407,591	$18,443,922
SELLING EXPENSES	$ 7,546,539	$ 6,890,735
GENERAL AND ADMINISTRATIVE EXPENSES	5,036,484	4,796,848
	$12,583,023	$11,687,583
Operating income	$ 6,824,568	$ 6,756,339
OTHER INCOME OR (EXPENSE)—		
Royalties and other income, net	$ 517,819	$ 416,288
Interest income	111,489	138,006
Interest expense	(474,146)	(136,280)
	$ 155,162	$ 418,014
Income before taxes, minority interest and extraordinary item	$ 6,979,730	$ 7,174,353
PROVISION FOR FEDERAL AND CANADIAN INCOME TAXES	3,160,000	3,420,000
Income before minority interest and extraordinary item	$ 3,819,730	$ 3,754,353
MINORITY INTEREST	20,209	19,153
Income before extraordinary item	$ 3,799,521	$ 3,735,200
EXTRAORDINARY ITEM—Recovery upon renegotiation of government contract (net of related expenses and $200,000 income taxes)	219,615	—
NET INCOME FOR THE YEAR	$ 4,019,136	$ 3,735,200

The provision for depreciation and amortization was $1,260,844 in 1967, and $1,013,884 in 1966.

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

CONSOLIDATED STATEMENT OF SOURCE AND APPLICATION OF FUNDS

FOR THE YEAR ENDED DECEMBER 31, 1967

SOURCE OF FUNDS:		
Net income for the year		$4,019,136
Provision for depreciation and amortization		1,260,844
Total provided from operations		$5,279,980
Increase in long-term debt		3,685,840
Sales of common stock under option plan		17,092
		$8,982,912
APPLICATION OF FUNDS:		
Additions to property, plant and equipment, net	$6,754,998	
Less—Market value of common stock issued for acquisition of property	1,816,685	$4,938,313
Cash dividends declared		1,592,669
Additional investments in affiliated companies		530,851
Other changes, net		55,199
		$7,117,032
INCREASE IN WORKING CAPITAL		$1,865,880

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

AUDITORS' REPORT

ARTHUR ANDERSEN & CO.
SOUTH BEND, INDIANA

To the Stockholders and
the Board of Directors of
The Wheelabrator Corporation:

We have examined the consolidated balance sheet of THE WHEELABRATOR CORPORATION (a Delaware corporation and a majority owned subsidiary of Bell Intercontinental Corporation) AND SUBSIDIARIES as of December 31, 1967, and the related statements of income, additional capital, retained earnings and source and application of funds for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We have previously examined and reported on the financial statements for the preceding year.

In our opinion, the accompanying financial statements present fairly the financial position of The Wheelabrator Corporation and Subsidiaries as of December 31, 1967, and the results of their operations and the source and application of funds for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ARTHUR ANDERSEN & CO.

South Bend, Indiana,
February 7, 1968.

CONSOLIDATED STATEMENTS OF ADDITIONAL CAPITAL AND RETAINED EARNINGS

FOR THE YEARS ENDED DECEMBER 31, 1967 AND 1966

ADDITIONAL CAPITAL	1967	1966
Balance at beginning of year	$ 7,230,212	$ 6,873,657
ADD:		
Excess of par value of $1.50 preferred stock (par value $35) over par value of common stock (par value $1) issued upon conversion; 7,365 shares of preferred converted into 19,246 shares of common in 1967 and 9,480 shares of preferred converted into 24,881 shares of common in 1966	238,529	306,630
Excess of option price over par value of common stock issued under stock option plan; 1,500 shares in 1967 and 4,384 shares in 1966 (Note 2)	15,592	49,925
Excess of market value over par value of 73,774 shares of common stock issued for acquisition of plants (Note 4)	1,742,911	—
Balance at end of year	$ 9,227,244	$ 7,230,212

RETAINED EARNINGS	1967	1966
Balance at beginning of year	$10,503,866	$ 8,337,903
ADD (DEDUCT):		
Net income for the year	4,019,136	3,735,200
Cash dividends declared—		
$1.50 preferred stock, $1.50 per share	(36,938)	(46,593)
5% second preferred stock, $.25 per share	(639,080)	(639,080)
Common stock, $.70 per share	(916,651)	(883,564)
Balance at end of year (Note 3)	$12,930,333	$10,503,866

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 1967

(1) PRINCIPLES OF CONSOLIDATION:

The accounts of all domestic and Canadian subsidiaries of the company are consolidated in the accompanying financial statements. The 1966 financial statements have been reclassified to conform with the report classifications used in the 1967 statements.

Twelve foreign companies are included as investments, at cost, in the accompanying financial statements. Results of operations attributable thereto are not reflected in these statements; however, dividends and royalties received from these investments are included in income.

Company	Country	Stock Ownership	Investment at Cost
Tilghman Wheelabrator, Ltd.	England	19%	$1,343,950
Graber & Wening AG	Switzerland	40%	569,753
Wheelabrator Allevard	France	51%	546,656
Sintobrator, Ltd.	Japan	40%	388,402
Ullrich & Roser G.m.b.H.	Germany	40%	215,801
Other foreign investments			281,509
			$3,346,071

(2) STOCK OPTIONS:

Under the stock option incentive plan adopted in 1964, 100,000 shares of common stock were reserved for options to officers and other key personnel. Options for 1,500 shares were exercised during the year at an aggregate price of $17,092. At December 31, 1967, options for 12,890 shares at prices from $5.71 per share to $31.00 per share were outstanding, of which options for 3,390 shares were exercisable. At December 31, 1967, 1,810 shares were available for future grants under the plan.

(3) PREFERRED STOCK REQUIREMENTS:

The Composite Certificate of Incorporation provides one vote for each share of preferred and common stock outstanding, and for restrictions on the amount of dividends on common stock (other than common stock) if specified amounts of unconsolidated retained earnings, or net current assets are not maintained, or preferred stock dividends are in arrears. Under such provisions, $10,430,333 of consolidated retained earnings at December 31, 1967, is not restricted as to dividend payments.

At December 31, 1967, 52,196 shares of common stock were reserved for conversion of the $1.50 preferred stock and 1,065,133 shares of common stock were reserved for conversion of the 5% second preferred stock.

The Composite Certificate of Incorporation provides that in 1968 the company will establish a sinking fund for partial redemption of the 5% convertible second preferred stock. The required 1968 sinking fund provision of $255,630 will redeem 51,126 shares of the 5% convertible second preferred stock unless otherwise directed by the Board of Directors, and the common shares reserved for conversion will be decreased by 21,302 shares. During 1967, the company offered to redeem 51,126 shares of the 5% convertible second preferred stock; however, this offer was declined by the holder of the 5% convertible second preferred stock.

(4) ACQUISITION OF PLANTS:

In 1967, the company acquired certain plants previously leased by the Wheelabrator Division from affiliated companies at a cost of $3,034,318. The company issued 73,774 shares of common stock with a market value of $1,816,685, assumed a mortgage of $80,670 and paid the balance of the purchase price in cash.

(5) CONTINGENCIES:

Certain sales of the company are subject to renegotiation. In the opinion of management, no significant liability should result from renegotiation.

DOMESTIC OPERATIONS

WHEELABRATOR DIVISION, Mishawaka, Ind.

Airless blast cleaning equipment, air pollution control systems, vibratory precision finishing machines, steel abrasives and abrasive compounds.

JAMES F. CONNAUGHTON, President
KENNETH E. BLESSING, Vice President and General Manager
*LESLIE L. ANDRUS, Vice President
JAMES E. DONLAN, Vice President and Controller
JAMES L. HESBURGH, Vice President-International Operations
D. ROGER NEELD, Vice President-Engineering
LEN B. NELSON, Vice President-Air Pollution Control
ROBERT L. ORTH, Vice President-Sales
F. JOHN PICHARD, Vice President-Marketing
PAUL H. SETZLER, Vice President-Operations
EDWARD T. SULLIVAN, Treasurer

*retired 12/31/67

W. W. CRISWELL CO. DIVISION, Riverton, N.J. and Riverside, Calif.

Fabric products for filtering solids from gas or liquid streams.

LEN B. NELSON, Vice President
CHARLES H. SLIKER, General Manager

ABRASIVE FINISHING COMPANY, Gardena, Calif.

Shot peening, abrasive cleaning and finishing facilities.

LEONARD J. KENNEDY, President

DELTA SONICS, INC., Hawthorne, Calif.

Ultrasonic cleaning, testing and welding equipment.

CARL J. GOLDBAUM, President

DOMESTIC SALES OFFICES

Atlanta, Georgia
Birmingham, Alabama
Buffalo, New York
Charlotte, North Carolina
Chicago, Illinois
Cincinnati, Ohio
Cleveland, Ohio
Columbus, Ohio
Dallas, Texas
Davenport, Iowa
Detroit, Michigan
Houston, Texas
Jackson, Mississippi
Louisville, Kentucky
Los Angeles, California
Milwaukee, Wisconsin
Mishawaka, Indiana
New York, New York
Philadelphia, Pennsylvania
Portland, Oregon
San Francisco, California
Sarasota, Florida
Springfield, Massachusetts
St. Louis, Missouri
Syracuse, New York
Union, New Jersey

TWIN INDUSTRIES CORPORATION DIVISION, Buffalo, N. Y.

Assemblies and sub-assemblies for military and commercial aircraft, ground handling and ground support equipment for aircraft and missiles, Twinfold material and machines.

ROBERT F. HURT, President
GEORGE R. HECHT, Senior Vice President and Director of Marketing
ERNEST SUMMERS, Senior Vice President and Director of Program Management
J. DOUGLAS FAST, Vice President and Director of Operations
DONALD A. COLLARD, Controller

BALCRANK DIVISION, Mishawaka, Ind.

Stationary and mobile lubrication equipment, service station hardware, industrial pumps, machinery accessories.

ELMER A. RICH, III, Vice President
FRANK A. JOHNSON, Vice President-Sales, Lubrication Equipment

INTERNATIONAL OPERATIONS

WHEELABRATOR CORPORATION OF CANADA LIMITED, Toronto, Ont., Canada
Robert A. Campbell, Vice President and General Manager

BARRDAY LIMITED, Galt, Ont., Canada
Charles H. Barrett, President

McDONALD WELDING LIMITED, Oakville, Ont., Canada
William E. Manrod, General Manager

EDWARD LIPSETT LTD., Vancouver, British Columbia, Canada
Harry C. Inman, President

TILGHMAN WHEELABRATOR LIMITED, Broadheath, Altrincham, Cheshire, England
R. C. Harrower, Managing Director

TILGHMAN WHEELABRATOR KENT (PTY.) LTD., Johannesburg, South Africa
J. F. Atwell, Managing Director

WHEELABRATOR TILGHMAN ENTSTAUBUNGS G.m.b.H., Cologne, Germany
Heinz Balland, Managing Director

SOCIÉTÉ WHEELABRATOR-ALLEVARD, Allevard (Isere), France
Georges Bietrix, Chairman of the Board and President

DEUTSCHE WHEELABRATOR STRAHMITTEL, G.m.b.H., Cologne, Germany
Heinz Balland, Managing Director

WHEELABRATOR ALLEVARD ESPANOLA, Barcelona, Spain
Hans Engels, President

GRABER & WENING AG, Neftenbach, Switzerland
Dr. Bernhard K. Greuter, Chairman
Werner Lory, Managing Director

ULLRICH and ROSER, G.m.b.H., Stuttgart-Bad Cannstatt, Germany
Otto W. Zollikofer, President
Werner Melzer, Managing Director

WHEELABRATOR de MEXICO, S.A., Estado de Mexico, Monterrey and Guadalajara, Mexico
John F. Cordell, Vice President and General Manager

WHEELABRATOR ARGENTINA, SAIC, Buenos Aires, Argentina
Pedro Herrendorf, Vice President and General Manager
Jorge Herrendorf, Vice President and Administrative Manager

SINTOBRATOR, LTD., Nagoya, Japan
Hideichi Kondo, President
Yuzuru Nagai, Vice President

INDABRATOR LIMITED, Bombay, India
J. V. Patel, Chairman

WHEELABRATOR METAL CLEANING CO. OF THE PHILIPPINES, INC., Quezon City
L. C. Young, President

WHEELABRATOR YIT THAILAND, LIMITED, Bangkok, Thailand
Chu Chutrakul, President

WHEELABRATOR METAL CLEANING COMPANY (P.T.E.) SINGAPORE LIMITED, Singapore
W. J. O. Cleugh, Managing Director

WHEELABRATOR COLOMBIA, S.A., Bogota, Colombia
Harry M. Hanabergh, President

WHEELABRATOR METALLREINIGUNGS GESELLSCHAFT DEUTSCHLAND G.m.b.H., Solingen, Germany
Heinz Balland, Managing Director

INTERNATIONAL MANUFACTURING ASSOCIATES

George Fischer Limited
Schaffhausen, Switzerland

Sintokogio, Ltd.
Nagoya, Japan

McPherson's Limited
Melbourne, Australia

Equipamentos Industriais
"Eisa" Ltd., Sao Paulo, Brazil

Carl Kurt Walther, G.m.b.H
Wuppertal-Vohwinkel, Germany

INTERNATIONAL SALES AGENTS

Neisser & Company, S.A., Lima, Peru
Mario R. Franceschini, Inc., Santurce, Puerto Rico
Motores, S. A. Bogota, Colombia
William Hunt & Co. (International), Inc., Taipei, Taiwan
Griffin Machinery Corporation, Manila, Philippines
Tecnagent, Santiago, Chile
Walco, S.C., Caracas, Venezuela

VITAL VALUES

FOR INDUSTRY

LITHO IN U.S